

# LTE MIMO ANTENNA

# LOW PROFILE MIMO ANTENNA WITH GPS

The light transit low profile MiMo antenna range has been designed to support the new generation of vehicular LTE routers. The antenna enclosure contains three isolated high performance antenna elements; two ultrawideband elements covering 698-2700MHz support MiMo/diversity at cellular/LTE frequencies and a high performance GPS antenna with an integrated 26dB gain LNA and high quality filtering to combat noise.

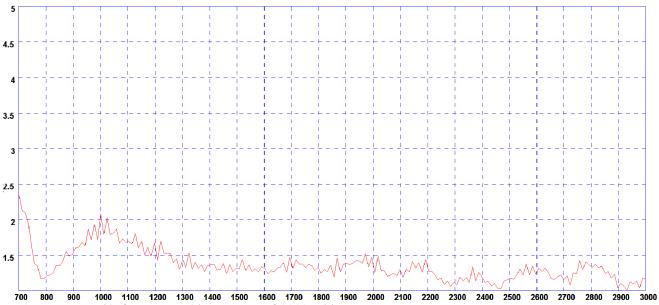
The antenna does not require a metalic ground plane, and maintains a high level of performance even when mounted on a non-metalic surface.

# **Ordering Information**

TE Part number	Housing colour: White	Housing Colour: Black	Elements 1 & 2	Elements 3, 4 & 5		1 CDC
			2x Cellular Elements (698- 960/ 1710-2700MHz)	2x WLAN Elements (2.4/4.906GHz)	3x WLAN Elements (2.4/4.9- 6GHz)	1x GPS (1575MHz 26dB gain)
1-2823595-1	<b>✓</b>		<b>✓</b>			<b>✓</b>
1-2823595-2		<b>√</b>	<b>✓</b>			<b>✓</b>
1-2823596-1	<b>✓</b>		<b>✓</b>			
1-2823596-2		<b>✓</b>	<b>✓</b>			
1-2823597-1	<b>✓</b>		<b>✓</b>	<b>✓</b>		
1-2823597-2		<b>✓</b>	<b>✓</b>	<b>√</b>		
1-2823598-1	<b>✓</b>		<b>✓</b>	<b>√</b>		<b>✓</b>
1-2823598-2		<b>✓</b>	<b>✓</b>	<b>√</b>		<b>✓</b>
1-2823599-1	<b>✓</b>		<b>✓</b>		<b>✓</b>	<b>✓</b>
1-2823599-2		<b>√</b>	<b>✓</b>		<b>√</b>	<b>√</b>

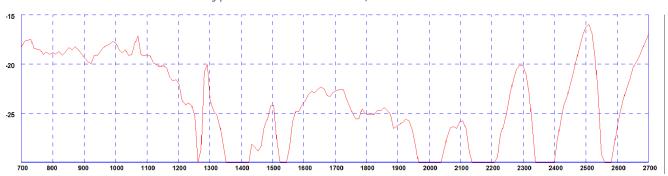


#### Typical VSWR cellular / LTE elements\*



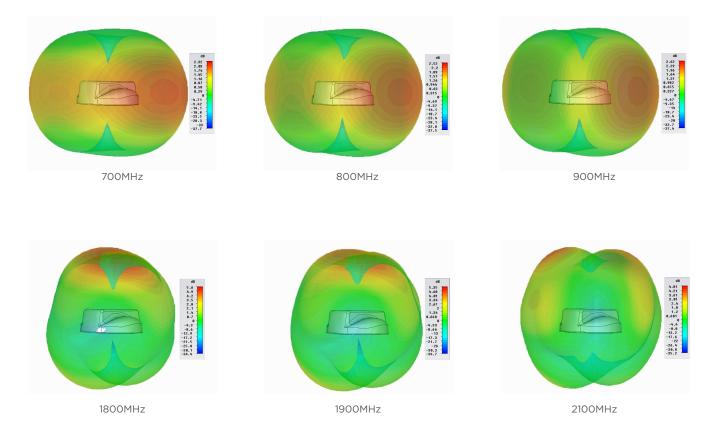
 $^{\ast}$  VSWR measured in free space with 4.5m (15') of CS29 cable.

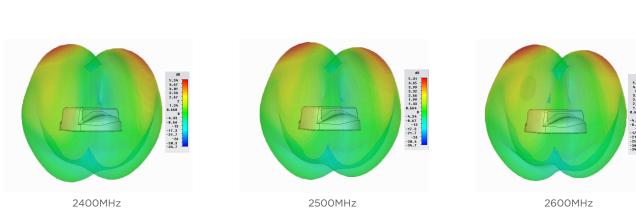
#### Typical Isolation cellular / LTE elements\*



 $^{\ast}$  Isolation measured in free space with 300mm (1') of cable.

# Typical 3D Pattern - Elements 1 & 2





Note: All pattern and gain measurements taken in free space without additional ground plane.

# **Technical Information**

Electrical Data				
	Elements 1 & 2	698-960 / 1700-2700		
Frequency Range (MHz)	Elements 3 & 4	2.4/4.9-6GHz		
	Elements 1 & 2	LTE / Cellular		
Operational Bands	Elements 3 & 4	WiFi		
	Elements 1 & 2: 698-960	2.3dBi		
Peak Gain Isotropic	Elements 1 & 2: 1710-2700	5dBi		
	Elements 3 & 4: 2.4/4.9-6.0GHz	2dBi		
Polarisation		Vertical		
VSWR	Elements 1 & 2	<2.5:1		
Isolation (in free space)	Elements 1 & 2	>15dB		
Impedance		50Ω		
Max Input Power (W)		50		
GPS Data				
Frequency Range (MHz)		1575		
VSWR		<2.0:1 <u>+</u> 4MHZ		
LNA Gain		26dB		
Polarisation		Right Hand Circular		
Operating Voltage		3-7V DC (fed via coax)		
Current (Typical)		14mA		
Mechanical Data				
D: .	Height	62mm (2.4")		
Dimensions	Diameter	176mm (6.7")		
Operating Temp		-30°C / +80°C (-22°F / 176°F)		
Material		ASA & diecast aluminium		
Ingress Protection		IP66		
Colour		White		
Mounting Data				
Mounting type		Panel mount		
Max panel thickness		6mm (0.236")		
Mounting hole				
Mounting note		19mm (3/4")		
Cable Data				
_	Туре			
Cable Data	Type Diameter	19mm (3/4")		
_		19mm (3/4") RG174		
Cable Data	Diameter	19mm (3/4")  RG174  2.8mm (0.11")		
Cable Data	Diameter Length	19mm (3/4")  RG174 2.8mm (0.11") 0.3m (11.8")		
Cable Data  GPS Cable	Diameter Length Termination	19mm (3/4")  RG174  2.8mm (0.11")  0.3m (11.8")  FME (female)		
Cable Data	Diameter Length Termination Type	19mm (3/4")  RG174  2.8mm (0.11")  0.3m (11.8")  FME (female)  CS29 (double shielded RG58)		
Cable Data  GPS Cable	Diameter Length Termination Type Diameter	19mm (3/4")  RG174 2.8mm (0.11") 0.3m (11.8")  FME (female)  CS29 (double shielded RG58)  5mm (0.2")		



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